

CORRECTED CLAIMS FOR JUNE 22, 2006 SUPPLEMENTAL AMENDMENT

LISTING OF CLAIMS

1. (currently amended) A vehicle air-conditioning system, comprising:

an air conditioning case defining a first housing portion and a second housing portion, said second housing portion being disposed at a location downstream of said first housing portion in an air flow direction;

a heating heat exchanger disposed in said first housing portion for heating air; and

a blow-mode changing door pivotably housed in a door-housing portion defined by said second housing portion, wherein

said second housing portion defines a first air inlet and a second air inlet which communicate with said first housing portion, said second air inlet is disposed higher than said first air inlet,

said first air inlet permits cool air to enter said second housing portion from said first housing portion, and said second air inlet permits hot air having passed through said heating heat exchanger to enter said second housing portion from said first housing portion,

said second housing portion further defines a foot opening and a face opening disposed downstream of said first air inlet and said second air inlet, said face opening is disposed higher than said foot opening,

said blow-mode changing door is a butterfly door movable to a first position where said foot opening is fully closed and said face opening is open, a second

position where said foot opening is open and said face opening is [[fully]] closed, and a third position where said foot opening and said face opening are open, wherein

in a bi-level mode in which said blow mode changing door is at said third position, a bi-level mode bypass passageway for introducing cool air from said first air inlet into said face opening is defined between an extremity of said blow mode-changing door and inner wall surface of said door-housing portion.

2. (previously presented) The vehicle air conditioning system according to claim 1, further comprising:

a sealing rib provided on the inner wall surface of said door-housing portion, wherein

said blow mode-changing door sealingly abuts against said sealing rib, thereby simultaneously blocking both said foot opening and said face opening.

3. (original) The vehicle air conditioning system according to claim 1, wherein

said door-housing portion is formed of a cylindrical portion parallel to an axial direction of said blow mode-changing door,

an expanded portion expanded radially outward is formed on part of a circumferential surface of said cylindrical portion, and

said bi-level mode bypass passageway is formed inside said expanded portion.

5. (original) The vehicle air conditioning system according to claim 2, wherein

 said door-housing portion is formed of a cylindrical portion parallel to an axial direction of said blow mode-changing door,

 an expanded portion expanded radially outward is formed on part of a circumferential surface of said cylindrical portion, and

 said bi-level mode bypass passageway is formed inside said expanded portion.

5. (original) The vehicle air conditioning system according to claim 3, wherein

 said cylindrical portion is disposed so as to extend in a transverse direction of the vehicle, with said expanded portion and said face opening being disposed at a central portion of the cylindrical portion in the transverse direction of the vehicle, and

 said foot opening is disposed at either side of said cylindrical portion in the transverse direction of the vehicle.

6. (withdrawn) The vehicle air conditioning system according to claim 1, wherein

 said door-housing portion is disposed so as to extend in a transverse direction of the vehicle,

said foot opening is disposed at either side of said cylindrical portion in the transverse direction of the vehicle,

 a width of said cool air inlet in the transverse direction of the vehicle is less than a width of said hot air inlet in the transverse direction of the vehicle, and

 said bi-level mode bypass passageway is located at a position corresponding to said cool air inlet in said door-housing portion in the transverse direction of the vehicle.

7. (withdrawn) The vehicle air conditioning system according to claim 2, wherein

 said door-housing portion is disposed so as to extend in a transverse direction of the vehicle,

 said foot opening is disposed at either side of said cylindrical portion in the transverse direction of the vehicle,

 a width of said cool air inlet in the transverse direction of the vehicle is less than a width of said hot air inlet in the transverse direction of the vehicle, and

 said bi-level mode bypass passageway is located at a position corresponding to said cool air inlet in said door-housing portion in the transverse direction of the vehicle.

8. (previously presented) The vehicle air conditioning system according to claim 1:

wherein said first housing portion defines an air passage through which air to be blown toward front seats in a passenger compartment flows and a rear seat cool air bypass passageway below said heating heat exchanger,

said first air inlet is a rear seat cool air inlet through which cool air is introduced from said bypass passageway to said second housing portion,

said second air inlet is a rear seat hot air inlet through which the hot air having passed through said heating heat exchanger is introduced in the second housing portion,

said foot opening is a rear seat foot opening for blowing air toward a foot of a rear seat passenger, and

said face opening is a rear seat face opening for blowing air toward an upper body of a rear seat passenger.

9. (withdrawn) The vehicle air conditioning system according to claim 6:

wherein said first housing portion defines an air passage through which air to be blown toward front seats in a passenger compartment flows and a rear seat cool air bypass passageway below said heating heat exchanger,

said first air inlet is a rear seat cool air inlet through which cool air is introduced from said bypass passageway to said second housing portion,

said second air inlet is a rear seat hot air inlet through which the hot air having passed through said heating heat exchanger is introduced in the second housing portion,

 said foot opening is a rear seat foot opening for blowing air toward a foot of a rear seat passenger, and

 said face opening is a rear seat face opening for blowing air toward an upper body of a rear seat passenger.

10. (withdrawn) The vehicle air conditioning system according to claim 7: wherein said first housing portion defines an air passage through which air to be blown toward front seats in a passenger compartment flows and a rear seat cool air bypass passageway below said heating heat exchanger,

 said first air inlet is a rear seat cool air inlet through which cool air is introduced from said bypass passageway to said second housing portion,

 said second air inlet is a rear seat hot air inlet through which the hot air having passed through said heating heat exchanger is introduced in the second housing portion,

 said foot opening is a rear seat foot opening for blowing air toward a foot of a rear seat passenger, and

 said face opening is a rear seat face opening for blowing air toward an upper body of a rear seat passenger.

12. (currently amended) An apparatus comprising:

a case defining a first air inlet and a second air inlet, wherein said second air inlet is disposed higher than said first air inlet, said first air inlet permits cool air to enter said case and said second air inlet permits hot air to enter said case;

a foot opening defined by said case and disposed lower than said first air inlet and said second air inlet;

a face opening defined by said case and disposed higher than said first air inlet and said second air inlet;

a blow mode-changing door, wherein said door is a butterfly door movable to a first position where said foot opening is fully closed and said face opening is open, a second position where said foot opening is open and said face opening is [[fully]] closed, and a third position where said foot opening and said face opening are open;

a door housing portion defined by the case for pivotally housing said blow mode changing door, wherein

the door housing portion is formed of a cylindrical portion parallel to an axial direction of said blow mode-changing door,

an expanded portion expanded radially outward is formed on a part of a circumferential surface of said door housing portion,

a bi-level mode bypass passageway is formed inside the said expanded portion, and said bi-level mode passageway permits cool air from said first air inlet into said face opening.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

By: 
Michael J. Schmidt, 34,007

Dated: October 3, 2006

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

MJS/pgm